

# Comparisons of Job Characteristics

**Focus Occupation:** [Geoscientists, Except Hydrologists and Geographers \(19-2042\)](#)

**Associated Occupation:** [Architectural and Engineering Managers \(11-9041\)](#)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

## Knowledge

Similarity of Focus Occupation to Associated Occupation: 67

**Focus Occupation:** Geoscientists, Except Hydrologists and Geographers (19-2042)

**Associated Occupation:** Architectural and Engineering Managers (11-9041)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Engineering and Technology	5.7	23.2	17.8	<<	Extensive education and/or training may be required
Design	5.2	19.0	8.7	<<	Extensive education and/or training may be required
Mathematics	9.2	17.4	16.0	0	Current knowledge level may be sufficient
Computers and Electronics	8.4	16.9	15.0	<	Expanded education and/or training may be required
Administration and Management	8.4	14.4	9.0	<<	Extensive education and/or training may be required
Physics	4.3	13.0	14.4	>	Current knowledge level is likely sufficient
Building and Construction	4.0	10.7	3.4	<<	Extensive education and/or training may be required
Production and Processing	6.0	10.7	3.4	<<	Extensive education and/or training may be required
Personnel and Human Resources	5.6	10.4	2.6	<<	Extensive education and/or training may be required
Economics and Accounting	4.4	8.1	5.8	<<	Extensive education and/or training may be required
Telecommunications	3.9	7.4	4.3	<<	Extensive education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Skills

Similarity of Focus Occupation to Associated Occupation: 77

**Focus Occupation:** Geoscientists, Except Hydrologists and Geographers (19-2042)

**Associated Occupation:** Architectural and Engineering Managers (11-9041)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Operations Analysis	5.0	13.9	7.9	<<	Extensive development of skills in this area may be required
Coordination	9.1	13.3	10.3	<<	Extensive development of skills in this area may be required
Complex Problem Solving	9.1	13.0	11.9	0	Current skill level may be sufficient
Time Management	8.9	12.8	10.6	<	A higher skill level may be required
Management of Personnel Resources	6.9	12.2	7.3	<<	Extensive development of skills in this area may be required
Mathematics	6.2	11.7	9.4	<	A higher skill level may be required
Systems Analysis	6.5	10.7	8.6	<	A higher skill level may be required
Systems Evaluation	6.4	10.7	8.3	<	A higher skill level may be required
Negotiation	6.8	10.2	7.6	<<	Extensive development of skills in this area may be required
Management of Financial Resources	3.3	9.7	3.1	<<	Extensive development of skills in this area may be required
Management of Material Resources	3.7	9.2	3.1	<<	Extensive development of skills in this area may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Abilities

Similarity of Focus Occupation to Associated Occupation: 97

Focus Occupation: Geoscientists, Except Hydrologists and Geographers (19-2042)

Associated Occupation: Architectural and Engineering Managers (11-9041)

Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Written Comprehension	11.0	15.2	16.0	0	Current ability level may be sufficient
Oral Comprehension	12.5	15.0	14.8	0	Current ability level may be sufficient
Deductive Reasoning	10.6	13.9	13.0	0	Current ability level may be sufficient
Problem Sensitivity	11.1	13.9	12.8	0	Current ability level may be sufficient
Written Expression	9.8	13.8	14.2	0	Current ability level may be sufficient
Mathematical Reasoning	6.3	13.3	10.3	<<	Extensive improvement in abilities may be required
Information Ordering	9.9	12.0	11.4	0	Current ability level may be sufficient
Category Flexibility	9.0	11.4	12.3	0	Current ability level may be sufficient
Number Facility	6.3	11.2	9.1	<	Some improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Activities that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: 82

**Focus Occupation: Geoscientists, Except Hydrologists and Geographers (19-2042)**  
**Associated Occupation: Architectural and Engineering Managers (11-9041)**

Work Activities	Exclusivity of Activity
Adhere to safety procedures	12
Advise clients or customers	19
Communicate technical information	4
Confer with engineering, technical or manufacturing personnel	25
Develop policies, procedures, methods, or standards	21
Direct and coordinate activities of workers or staff	3
Direct geological surveys	99
Evaluate engineering data	60
Explore for oil or gas	92
Make decisions	24
Make presentations	13
Perform statistical analysis in physical science or geological research	71
Prepare reports	8
Prepare technical reports or related documentation	22
Read technical drawings	7
Resolve engineering or science problems	46
Understand engineering data or reports	48
Use project management techniques	47
Use scientific research methodology	21
Write business project or bid proposals	48

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Tools and Technologies that Both Occupations Have in Common

**Similarity of Focus Occupation to Associated Occupation: 70**

**Focus Occupation: Geoscientists, Except Hydrologists and Geographers (19-2042)**  
**Associated Occupation: Architectural and Engineering Managers (11-9041)**

Tools and Technologies	Exclusivity
Business function specific software	1
Chromatographic measuring instruments and accessories	16
Computer data input devices	2
Computers	1
Content authoring and editing software	1
Content management software	6
Data management and query software	1
Electrochemical measuring instruments and accessories	9
Indicating and recording instruments	2
Industry specific software	1
Information exchange software	1
Laboratory decanting and distilling and evaporating and extracting equipment and supplies	19

Laboratory enclosures and accessories	17
Laboratory heating and drying equipment	13
Network applications software	1
Spectroscopic equipment	10
Temperature and heat measuring instruments	6
Viewing and observing instruments and accessories	4

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.